

Application No. 10/636,696
Response dated September 14, 2006
Response to Office action dated June 15, 2006

REMARKS

This reply is submitted in response to the Office action of June 15, 2006. Claims 1-5 and 13-17 are pending in the present application. Claims 1 and 2 have been rejected. Claims 3-5 and 13-17 are objected to as depending from a rejected base claim. The Applicants gratefully acknowledge indication for the allowable subject matter. The Examiner's reconsideration is respectfully requested with respect to the rejection of claims 1 and 2 in view of the following remarks. The Applicants submit that claims 1-5 and 13-17 are in condition for allowance for at least the reasons presented herein.

Rejections under 35 U.S.C. § 103

In order for an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996). See MPEP 2143.

The Examiner has rejected claim 1 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Wei et al. (U.S. Patent Publication No. 2003/0137485 A1, hereinafter "Wei") in view of Funamoto et al. (U.S. Patent Publication No. 2003/0142118 A1, hereinafter "Funamoto"). In addition, claim 2 has been rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Wei in view of Funamoto and further in view of Lee et al. (U.S. Patent Publication No. 2002/0057247 A1, hereinafter "Lee"). Applicants respectfully traverse these rejections for the following reasons.

Claim 1.

Wei discloses in FIG. 3 a circuit diagram of a light source adjusting circuit. The light source adjusting circuit has a photo sensor (34) connected to an amplification circuit (44) that is

P2002-0053226
OPP 021133 US
YOM-0034

Page 7 of 9.

Application No. 10/656,696
Response dated September 14, 2006
Response to Office action dated June 15, 2006

further connected to a light source modulator (42) that is capable of spontaneously adjusting a back-light source (38) depending on an ambient illumination. As acknowledged by the Examiner, Wei does not disclose an inverter comprising an inverter controller generating a carrier signal for pulse width modulation and controlling the on-time of the lamp driving signal in response to at least one of a vertical synchronization signal and a vertical synchronization start signal of Claim 1. The Examiner alleges that Funamoto discloses this limitation.

Funamoto discloses a liquid crystal display apparatus including a motion detection circuit (2) for detecting the amount of motion of a display image based on the video signal and a PWM (pulse width modulation) modulation pulse generation circuit (4) for generating modulation pulses different in frequency according to the detection result from the motion detection circuit (2). (Figs. 1-3.) In FIG. 3 Funamoto specifically discloses a PMW modulation pulse generating circuit (4) that includes a 240Hz PWM pulse generator (16) for generating a 240 Hz PWM modulation pulse synchronizing with the vertical synchronizing signal; a 60 Hz PWM pulse generator (18) for generating a 60 Hz PWM modulation pulse synchronizing with the vertical synchronizing signal; and a selector (20) for switching between the output of (16) and (18) based on the result of the motion detection by the motion detection circuit (2) and outputting the selected pulse as the modulation pulse. Funamoto controls the on-time of the lamp based in response to a motion detection signal from the motion detection circuit (2). (See, paragraph 0148.) Funamoto specifically discloses that the PWM modulation pulse generation circuit 4 generates the modulation pulse *based on the motion detection result from the motion detection circuit 2*, such as if the display image is a moving image or if the display image is a still image. (See, paragraph 0149.) The modulation pulse generated by the generators (16) or (18) merely synchronize with the vertical synchronizing signal, but form no basis for selection of the modulation pulse generated by the selector (20).

Applicants respectfully submit that there is no teaching, disclosure or suggestion in Funamoto disclosing an inverter controller generating a carrier signal for pulse width modulation and a lamp driving signal having on-time and off-time by pulse width modulating a dimming signal based on the carrier signal and controlling the on-time of the lamp driving signal in response to at least one of a vertical synchronization signal and a vertical synchronization start signal of Claim 1.

Application No. 10/636,696
Response dated September 14, 2006
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Funamoto in fact teaches away from this limitation, suggesting that only the motion detection signal is necessary in order to control the on-time of the lamp.

The Applicants submit that an inverter controller generating a carrier signal for pulse width modulation and a lamp driving signal having on-time and off-time by pulse width modulating a dimming signal based on the carrier signal and controlling the on-time of the lamp driving signal in response to at least one of a vertical synchronization signal and a vertical synchronization start signal, is neither taught nor rendered obvious by the cited references, either alone, or in combination. Accordingly, for at least these reasons, independent claim 1, and claims depending therefrom, i.e., claim 2 are in condition for allowance.

Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

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P2002-0053226
OPP 021133 US
YOM-0054

Page 9 of 9.